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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/082,861

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Guillaume Brouard

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

CHU, DAVID H

ART UNIT

PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/082,861

Applicant(s)

BROUARD ET AL.

Examiner

David H. Chu

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/06/2006 has been entered.

Oath/Declaration

2. The objection to the Oath/Declaration is withdrawn.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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5. Claim 10 recites a computer program per se. Computer programs per se, not stored on a computer readable medium, are abstract ideas. Computer programs per se are not capable of performing any function (See MPEP 2106).

6. It is suggested that the preamble be amended to recite, "A computer readable media having stored thereon a computer program product that is executed by the computer for..."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. **Claims 1 and 5 are rejected under 35 U.S.C. 102(a) as being anticipated by Rajan (WO 00/01154).**

9. Note with respect to claim 1,

10. Rajan teaches:

A method of composing a scene content from digital video data streams containing video objects, said method comprising:

- Generating decoded object frames from said digital video data streams (Rajan, pg 13, line 11-20)
- Composing intermediate-composed frames in a composition buffer (FIG. 1, 126...136 & pg 15, line 28 – pg 16, line 2) from the decoded object frames (pg 20, line 3-6) (pg 20, line 20-24)
- Scaling the intermediate-composed frames for generating output frames constituting scene content

*[scaling the rendered data for display on a display device is the equivalent to scaling intermediate-composed frames, wherein the **rendered data** is the **intermediate-composed frames** and the **finalized output frame** (result of scaling) is the **output frame** as recited by*

applicant}

(pg 20, line 3-6)

11. Note with respect to claim 5,

12. Rajan teaches:

A device for composing a scene content from digital video data streams containing video objects, said device comprising:

- **Decoding means** (Content Decoders: pg 13, line 11-20) for providing decoded object frames from said digital video data streams
- **Rendering means** (Presentation Engine: pg 20, line 3-6, pg 20, line 20-24) for composing intermediate-composed frames in a composition buffer from said decoded object frames

Characterized in that said device also comprises:

- **Scaling means** (Presentation Engine: pg 20, line 3-6) applied to said intermediate-composed frames for generating output frames constituting scene content

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 6, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rajan as applied to claims 1 and 5 above, and further in view of Ezer et al. U.S. Patent No. 6,275,239, and applicant's admitted prior art.**

15. Note with respect to claim 6,

16. Raja does not expressly teach:

The device of claim 5,

Wherein the decoding means comprises:

- A signal processor operative to execute decoding from the digital video data stream

The rendering means comprises:

- A signal co-processor operative to execute rendering and scaling of the decoded object frames separately from the signal processor
- The signal processor and the signal co-processor being operative to execute synchronized and parallel calculations for creating simultaneously current and future output frames from said intermediate-composed frames

17. However, Ezer et al. teaches:

- The use of a media coprocessor 102 that contain multiple processors for performing 3D graphics, video and audio functions in addition to a CPU 101, best shown in FIG. 1 (col. 3, line 27 - col. 4, line 35)

18. Further, the applicant admits that the processing means of a signal processor (SP) and signal co-processor (SCP) are well known by those skilled in the art for performing non-extensive data manipulation tasks and extensive data manipulation tasks respectively (Specification, pg 5, line15-18).

19. To partition the two steps is inherent for a device/method that contains multiple processors carrying out different processes.

20. Therefore, it would have been obvious to one of an ordinary skill in the art to ***apply the media coprocessor teachings of Ezer et al. to the teachings admitted in prior art by the applicant to carry out multiple tasks, because this will allow efficient and faster processing of multiple tasks simultaneously.***

21. Note with respect to claim 10,

22. Rajan does not expressly teach:

A computer program readable by a device for composing a scene content from decoded objects frames and causing the device to perform operations, the operations comprising:

- Decoding the digital video data streams for generating respective decoded object frames
- Rendering the decoded object frames for composing intermediate-composed frames in a composition buffer
- Scaling the intermediate-composed frames for generating output frames constituting scene content

23. However, Rajan teaches:

- A present invention that relates to a method and apparatus for composing and presenting multimedia video programs using the MPEG-4 standard [0040]
- A general architecture for a multimedia receiver terminal [0041]

24. It is well known in the art for a receiver terminal to have a processor to carry out the relevant tasks; wherein a set of instructions (computer program) supervises said processor.

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25. Therefore, it would have been obvious to one of an ordinary skill in the art to ***apply a computer program to the multimedia receiver terminal teachings of Rajan, because it would be impractical to carry out the complex task recited by the applicant without a processor and a computer program that instructs it.***

26. Note with respect to claim 12, claim 12 is similar in scope to the claims 10 and 3, thus the rejections to claims 10 and 3 hereinabove are also applicable to claim 12.

27. **Claims 3-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rajan, further in view of Ezer et al., and admitted prior art as applied to claims 6, 10 and 12 above, and further in view of Foley ("Computer Graphics: Principles and Practice").**

28. Note with respect to claim 3,

29. The combined teachings of Rajan and Ezer et al. teaches:

- The steps of decoding, rendering and scaling to be concurrent

[refer to rejection above with respect to claims 1 and 5. Note further, Rajan teaches the two processes done by the presentation engine 150 and composition engine 120 being independent of one another. The processes being independent of one of another further indicates the processes be carried out simultaneously] [0071]

30. However, the combined teachings of Rajan and Ezer et al. does not expressly teach:

A method of claim 1,

- Wherein the scaling of a current intermediate-composed frame and the decoding of a future intermediate-composed frame are provided simultaneously by a signal co-processor and a signal processor, respectively, operable synchronously and parallel to one another

31. Foley teaches:

- It is well known in the art to apply a Pipeline system wherein **multiple processors process in parallel** to speed computations through concurrency
- The stages of a Pipeline can be assigned to separate hardware units
(pg 877, ch18.5)

32. The combination of the teachings of having concurrent steps of decoding, rendering and scaling by the combined teachings of Rajan and Ezer et al., and the pipeline teachings of Foley, result in the establishment of having separate processors in a Pipeline system carrying out the different tasks of “scaling” and “decoding” as recited by the applicant.

33. Therefore, at the time of the invention, it would have been obvious to one of an ordinary skill in the art to apply the ***Pipeline system and processing in parallel teachings of Foley*** to the ***concurrent steps of the combined teachings of Rajan and Ezer et al.***, because ***this will result in faster computation of processes.***

34. Therefore, at the time of the invention, it would have been obvious to one of an ordinary skill in the art to apply the ***“concurrent processing teaching of Foley”*** to the ***independent processing of the combined teachings of Rajan and Ezer et al.***, because ***this will result in faster computation of processes*** (Foley, Ch 18.5, line 2-4).

35. Note with respect to claims 4 and 8,

36. Rajan teaches:

37. The method of claim 3,

- Wherein 3 during the scaling of the current intermediate-composed frame, the decoding of the future intermediate-composed frame is limited to decoding a maximum number of object frames used for the composition future intermediate-composed frames

[Rajan teaches the use of a decoding buffer 133 (FIG. 1). For the decoding step being "limited to decoding a maximum number of object frames used for composition" is inherent, as the size of the buffer is the determining factor that sets the number of maximum frames]

38. **Claims 9 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalluri et al. U.S. Patent No. 6,934,660, and further in view of Rajan.**

39. Note with respect to claim 9, claim 9 is similar in scope to the claim 1, thus the rejections to claim 1 hereinabove are also applicable to claim 9.

40. However, Rajan does not expressly teach:

- A set top box for composing a scene content from digital video data streams encoded according to the MPEG-4 standard

41. Kalluri et al. teaches:

- A set top box for composing a scene content from digital video data streams encoded according to the MPEG-4 standard
(col. 2, line 54-67 & col. 5, line 32-37)

42. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the ***teachings of Rajan discussed above with respect to claim 1***, to the ***set top box teachings of Kalluri***, because ***this allow the set top box to more efficiently decode, render and scale objects.***

43. Note with respect to claim 11, claim 11 is similar in scope to the claims 9 and 3, thus the rejections to claims 9 and 3 hereinabove are also applicable to claim 11.

Response to Arguments

44. Applicant's arguments, filed 12/06/2006, with respect to claims 1 and 5 have been fully considered and are persuasive. The 102(e) rejection of claims 1 and 5 has been withdrawn.

45. Applicant's arguments filed 12/06/2006, with respect to claims 3-4, 6, 8 and 10 with regards to the applicant's admitted prior art have been fully considered but they are not persuasive.

46. Following are the examiner's response to the applicant's arguments.

47. The applicant argues:

- The applicant do not concede the subject matter disclosed on page 5, lines 15-18 of the instant application prior art

[The applicant's disclosure, "said processing means being well known by those skilled in the art" clearly indicates such teaching as prior art]

- There is no teaching, suggestion or motivation to combine references Ezer and Foley

[The motivation to combine the two references has been clarified above in the present rejection]

Conclusion

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Chu whose telephone number is (571) 272-8079. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark K. Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DHC



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